IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFFERENCES

In re application of: Lesley Davenport and Piotr Targowski

Serial No: 09/659,412 **Group Art Unit: 2851**

Filed: September 11, 2000 **Examiner: Magda Cruz**

For: A Direct Method For The Correction Of Pressure Induced Scrambling Effects On Polarized Light

Confirmation No. 4614

Express Mail No. EV 513558919 US
Date: December 15, 2004

Mail Stop Appeal Briefs- Patent
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPELLANT'S BRIEF PURSUANT TO 37 C.F.R. § 1.192

Appellants appeal the Final Rejection dated February 25, 2004 in connection with the above-identified application. No Advisory Action was received. A Notice of Appeal with appropriate fees was filed on June 22, 2004.

I. Real Party in Interest

The real party in interest in the above-identified patent application is the inventors, Lesley Davenport and Piotr Targowski. No Assignment has been executed or filed in this application.

II. Related Appeals and Interferences

Appellants undersigned attorney is unaware of any related appeal or interference that will affect or be affected by or have any bearing on the decision rendered in this appeal.

III. Status of Claims

The present application was filed with claims 1-42. Claims 14-17, 24-28 and 36-42 were canceled pursuant to the restriction levied in this application. Claims 3-5, 10-13, 18, 21-23 and 29-30 were amended during prosecution. Claims 3-7, 10-13, 21-23 and 30-35 are objected to as being dependent upon a rejected base claim, but are said to be allowable if rewritten in independent form. Claims 1, 2, 8, 9, 18-20 and 29 are now on appeal. Appealed Claims 1, 2, 8, 9, 18-20 and 29 appear in Appendix A.

IV. Status of Amendments

No amendments have been filed after the final rejection was received.

V. Summary of the Invention

Appellants' claimed invention relates to a method of directly and simultaneously correcting steady-state polarized fluorescence intensities, depolarized by the effects of applied hydrostatic pressure.

VI. Issue

The issue in this appeal is whether Claims 1, 2, 8, 9, 18-20 and 29 are anticipated under 35 U.S.C. §102(b) by Targowski, P. et al., Journal of Fluorescence, Vol. 8, No. 2, 1998.

VII. Grouping of the Claims

The claims on appeal are considered to be two group of claims:

Group 1 consists of Claims 1, 8, 18, 19 and 29, which will either stand or fall together; and

Group 2 consists of Claims 2, 9 and 20, which will either stand or fall together.

VIII. Argument

Issue 1 Claims 1, 8, 18, 19 and 29 are improperly rejected under 35 U.S.C. § 102(b) in view of Targowski, P. et al., Journal of Fluorescence, Vol. 8, No. 2, 1998 (Targowski et al.)

The rejection of Claims 1, 8, 18, 19 and 29 under 35 U.S.C. § 102(b) for anticipation by Targowski, P. et al., Journal of Fluorescence, Vol. 8, No. 2, 1998 (hereinafter "Targowski et al.") is improper and should be reversed because the cited reference fails to enable those of skill in the art to practice the invention of Claims 1, 8, 18, 19 or 29.

The Final Office Action asserts that Targowski et al. discloses the methods of the Claims on Appeal, specifically stating with regard to each method that Targowski et al discloses methods:

> ... comprising the steps of measuring polarized fluorescence intensities **and then determining excitation and emission correction factors** (see pp. 122-3, "Fluorescence Measurements," esp. second and third paragraphs); wherein said true values are obtained from said fluorescence intensities without performing a separate pressurized calibration experiment (see pp. 122-3, "Fluorescence Measurements," esp. third paragraph).

Final Office Action at page 2 (emphasis added). The Office Action makes similar assertions, regarding each of the methods of the Claims on Appeal, and citing to the same section of the Targowski et al. reference. With regard to Claim 29, the Office Action further cites to page 124 of Targowski et al. and to Figure 1 thereof.

However, the present rejection is improper because the Final Office Action has ignored the fact that the Targowski et al. reference (which is authored by the Applicants of the present Application on appeal) does not place the invention in the possession of the public, because it does not describe ***how the correction is achieved***. Specifically, the Targowski et al. reference

does not describe ***how to determine excitation and emission correction factors***. Indeed, the Targowski et al. reference itself plainly states that it does not provide such a teaching:

> Correction for the induced scrambling of the four measured polarization components due to birefringent pressure effects on the quartz observation windows of the HPSC was achieved using an extension of the method essentially described by Paladini and Weber [14]. However, in the approach employed here, rather than performing a second experiment to determine the combined (excitation and emission) scrambling coefficient, [α(p)] from a highly sample with an expected observed EA value close to its known limiting anisotropy value [e.g., DPH in glycerol (4μM); expected $r_0 = 0.4$], the independent scrambling factors, *X(p)* (for excitation) and *Y(p)* (for emission), may be resolved and were measured *simultaneously* at the time of sample data collection. **This "direct" approach has been described in detail elsewhere [15].**

Targowski et al. at page 123 (italics in original; bold emphasis added).

The Claims on Appeal are directed to the "direct approach" for the correction of induced scrambling of the four measured polarization components due to birefringent pressure effects that is referred to in the quotation from Targowski et al. above, and cited by the Office Action. As recited in the claims on appeal, this "direct approach" involves the determination of ***excitation and emission correction factors directly from the measured polarized fluorescence intensities***. Beneficially, this approach eliminates the need (required by the prior art methods) to perform a separate experiment to determine a ***combined*** (excitation and emission) scrambling coefficient.

There is no teaching whatsoever in the Targowski et al. reference of ***how to determine excitation and emission correction factors.*** Rather, the Targowski et al. reference merely states that "the independent scrambling factors, *X(p)* (for excitation) and *Y(p)* (for emission), *may be resolved and were measured simultaneously at the time of sample data collection.*" But Targowski et al. does not provide (and specifically omits) any teaching of a procedure for obtaining (i.e., resolving) the independent factors. Moreover, Targowski et al. plainly states that the procedure for obtaining the factors "has been described in detail elsewhere [15]." And the reference [15] referred to in Targowski et al. is the Applicants' own publication, which did not publish until after the priority date of the present application. Thus, the only teaching of the claimed methods is in Applicants' specification, and in their reference that published after the priority date of the their application.

Thus, at best, the Targowski et al. reference provides a ***result*** obtained by the claimed method, ***but specifically leaves out the teaching of the method itself.*** Since the Targowski et al. reference fails completely to inform those of skill in the art how to determine excitation and emission correction factors, those of skill in the art, reading the Targowski et al. reference, could not practice the invention as recited in Claims 1, 8, 18, 19 or 29 on appeal. As it is settled law that to anticipate, under 35 U.S.C. §102(b), a reference must enable those of skill in the art to make and use the invention. In re Donohue, 766 F.2d 531, 533, 226 USPQ 619, 621 (Fed. Cir. 1985). As those of skill in the art, reading the Targowski et al. reference, would be unable to determine excitation and emission correction factors as recited in the Claims 1, 8, 18, 19 or 29, the Targowski et al. reference does not enable those of skill in the art to make and use the invention, and therefore cannot anticipate these claims. Accordingly, the rejection should be reversed.

Issue 2 Claims 2, 9 and 20 are improperly rejected under 35 U.S.C. § 102(b) in view of Targowski, P. et al., Journal of Fluorescence, Vol. 8, No. 2, 1998 (Targowski et al.)

The rejection of Claims 2, 9, and 20 under 35 U.S.C. § 102(b) for anticipation by the Targowski et al. reference is improper and should be reversed because the cited reference fails to enable those of skill in the art to practice the invention of Claims 2, 9 or 29.

Claims 2, 9 and 20 depend from, and incorporate the limitations of, Claims 1, 8 and 19, respectively, which are discussed above in Group I. Thus, the argument above for the claim of Group I applies with equal force to these claims, and the rejection of the claims of Group II should be reversed for that reason alone.

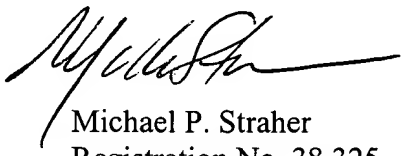
However, Claims 2, 9 and 20 contain the additional limitation that the differences in polarized fluorescence intensities are obtained without performing a separate pressurized calibration experiment. The Targowski et al. reference does not place the invention of Claims 2, 9 and 20 in the possession of the public, because it does not describe *how the true difference in polarized fluorescence intensities are obtained without performing a separate pressurized calibration experiment* as recited in Claims 2, 9 and 20. Indeed, as discussed above, the

Targowski et al. reference itself admits that it does not describe how to determine the recited excitation and emission correction factors. And it is the determination of those separate correction factors that allows one to avoid having to perform a separate calibration experiment (i.e., a second experiment to determine a combined (excitation and emission) scrambling coefficient as described in the Targowski et al. reference, by using a sample with an expected observed EA value close to its known limiting anisotropy value). Accordingly, those of skill in the art, reading the Targowski et al. reference, would be ***unable*** to extract true values of emission anisotropy (as recited in Claim 2), extract corrected values for total intensities (as recited in Claim 9), or obtain true differences in polarized fluorescence intensities (as recited in Claim 20) without performing a separate a separate pressurized calibration experiment, because the Targowski et al reference does not teach how to obtain the requisite emission and excitation correction factors. Therefore, the Targowski et al. reference does not enable those of skill in the art to make and use the invention of Claims 2, 9 and 20, and therefore cannot anticipate the these claims. Accordingly, the rejection should be reversed.

IX. Conclusion

The rejection of Claims 1, 2, 8, 9, 18-20 and 29 under 35 U.S.C. § 102(b) for anticipation by the Targowski et al. is improper and should be reversed. For the many reasons cited above, Applicants contend that the appealed Claims 1, 2, 8, 9, 18-20 and 29 are patentable.

Respectfully submitted,



Michael P. Straher
Registration No. 38,325

Date: December 15, 2004

COZEN O'CONNOR
1900 Market Street
Philadelphia, PA 19103
Tel: (215) 665-5548

Appendix A

The following claims are on appeal:

Claim 1. A method for the extraction of true values of emission anisotropy ($<r>_{corr}$) from fluorescence intensities obtained for a sample under an applied hydrostatic pressure *(p)*, comprising the steps of measuring polarized fluorescence intensities and then determining excitation and emission correction factors.

Claim 2. The method of claim 1 wherein said true values of emission anisotropy are obtained from said fluorescence intensities without performing a separate pressurized calibration experiment.

Claim 8. A method for the extraction of corrected values of total intensities (S_{corr}) from polarized fluorescence intensities obtained for a sample under an applied hydrostatic pressure *(p)*, comprising the steps of measuring polarized fluorescence intensities and then determining excitation and emission correction factors.

Claim 9. The method of claim 8 wherein said corrected total intensities (S_{corr}) are obtained from said polarized fluorescence intensities without performing a separate pressurized calibration experiment.

Claim 18. A method as recited in claim 1, further comprising determining a steady state fluorescence emission anisotropy value ($<r>_{corr}$).

Claim 19. A method for obtaining the true difference in polarized fluorescence intensities (D) from fluorescence intensities obtained for a sample under an applied hydrostatic pressure *(p)*, comprising the steps of measuring polarized fluorescence intensities and then determining excitation and emission correction factors.

Claim 20. The method of claim 19 wherein said true difference in polarized fluorescence intensities (D) are obtained from said fluorescence intensities without performing a separate pressurized calibration experiment.

Claim 29. A computer readable storage medium comprising computer executable code for instructing a computer-controlled instrument to perform acts of measuring polarized fluorescence intensities and then determining excitation and emission correction factors.